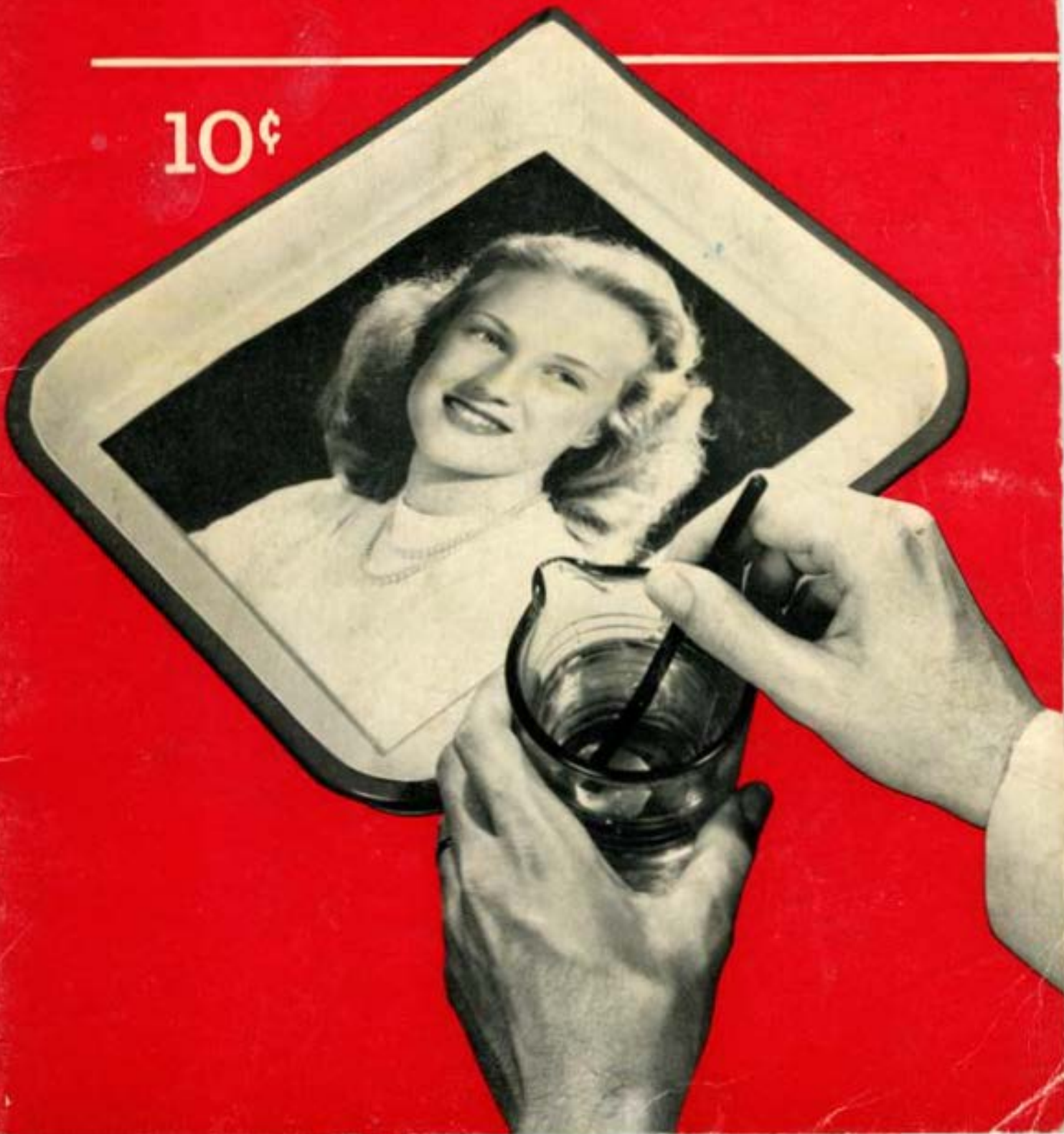
Ansco Formulas

FOR BLACK-AND-WHITE PHOTOGRAPHY

10¢



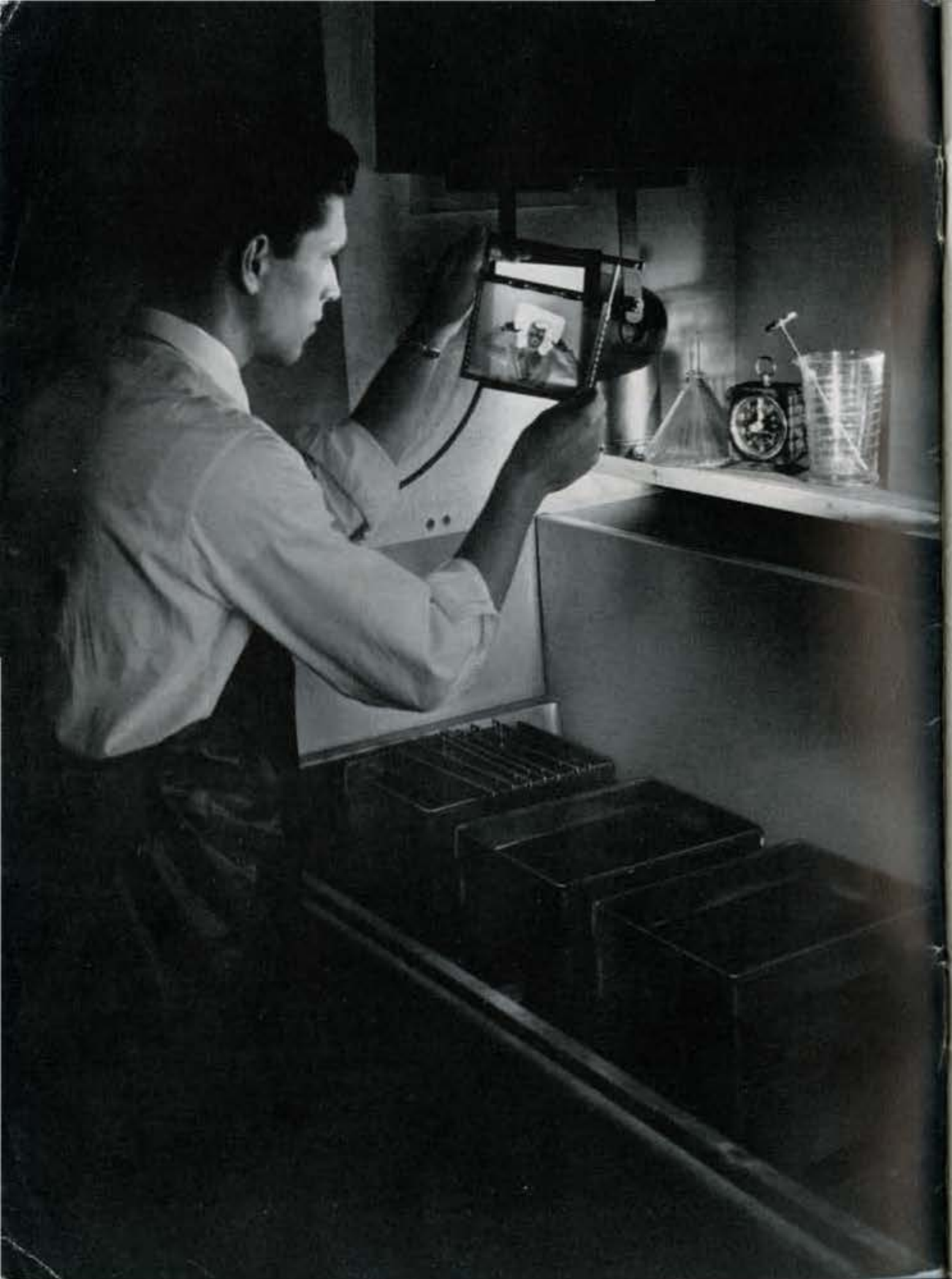


TABLE OF CONTENTS

CONVERSION TABLES

The following conversion tables are presented for those who need a quick and simple means of converting weight and volumes.

WEIGHT

1 pound	= 16 ounces = 7000 grains = 453.6 grams = 0.4536 kilograms	1 kilogram	= 2.205 pounds
		1 gram	= 15.43 grains = 0.035 ounces
1 ounce	= 437.5 grains = 28.35 grams		
1 grain	= 0.0648 gram		

LIQUID

1 gallon	= 4 quarts = 128 ounces = 1024 drams = 3785 cc. = 3.785 liters	1 dram	= 0.125 ounce = 3.697 cc.
		1 liter	= 1000 cc. (milliliters) = 33.81 ounces = 1.057 quarts = 0.2642 gallon
1 quart	= 32 ounces = 946.3 cc. = 0.9463 liter	1 cc.	= 0.001 liter = 0.03381 ounce
1 ounce	= 29.57 cc.		

FRACTIONAL

1 pound	= 16 ounces	= 7000	grains	= 453.6	grams	= 0.4536 kilograms				
½ pound	= 8 ounces	= 3500	grains	= 226.8	grams					
¼ pound	= 4 ounces	= 1750	grains	= 113.4	grams					
1/16 pound	= 1 ounce	= 437.5	grains	= 28.35	grams					
1 gallon	= 4 quarts	= 8	pints	= 128	ounces	= 3785	cc.	= 3.785	liters	
¼ gallon	= 1 quart	= 2	pints	= 32	ounces	= 946.3	cc.	= 0.9463	liter	
⅛ gallon	= ½ quart	= 1	pint	= 16	ounces	= 473.2	cc.	= 0.4732	liter	
1/128 gallon	= 1/32 quart	= 1/16	pint	= 1	ounce	= 29.57	cc.	= 0.0296	liter	

DEVELOPING FORMULAS

ANSCO 17 • FINE-GRAIN BORAX TANK DEVELOPER

This is a fine-grain developer recommended for all Ansco roll, pack and 35 mm films. It can also be used for obtaining soft gradation with Ansco portrait and press films. It is recommended for motion picture negative development. This soft-working, fine-grain developer may be obtained in packaged form by ordering Ansco 17 developer.

	Metric	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces 3 quarts
Metol	1.5 grams	22 grains 88 grains
Sodium Sulfite, anhydrous	80 grams	2½ oz. 80 gr. 10¾ ounces
Hydroquinone	3 grams	44 grains ¼ oz. 65 gr.
Borax	3 grams	44 grains ¼ oz. 65 gr.
Potassium Bromide	.5 gram	7.5 grains 30 grains
Water to make	1 liter	32 ounces 1 gallon

Do not dilute for use.

Tank developing time at 68 F (20 C), 10 to 15 minutes for fine-grain films, 12 to 20 minutes for portrait and press films.

Tray developing time at 68 F (20 C), 8 to 12 minutes depending on film type and density desired.

ANSCO 17A REPLENISHER

Add ¾ ounce of replenisher to Ansco 17 for each roll of 120 film or 36-exposure 35 mm film (or equivalent) developed. Maintain original volume of developer, discarding if necessary some used developer. No increase in original developing time is necessary when replenisher is used in this manner until the developer is exhausted. Available in packaged form by ordering Ansco 17A Replenisher.

	Metric	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces 3 quarts
Metol	2.2 grams	32 grains ¼ oz. 20 gr.
Sodium Sulfite, anhydrous	80 grams	2½ oz. 80 gr. 10¾ ounces
Hydroquinone	4.5 grams	66 grains ½ oz. 45 gr.
Borax	18 grams	½ oz. 44 gr. 2¼ oz. 65 gr.
Water to make	1 liter	32 ounces 1 gallon

ANSCO 17M • FINE-GRAIN METABORATE TANK DEVELOPER

This formula is similar to Ansco 17 but due to the use of sodium metaborate as an alkali, permits greater variation in developing time.

	Metric	*Avoirdupois*	
Hot Water (125 F or 52 C)	750 cc.	24 ounces	3 quarts
Metol	1.5 grams	22 grains	88 grains
Sodium Sulfite, anhydrous	80 grams	2½ oz. 80 gr.	10¾ ounces
Hydroquinone	3 grams	44 grains	¼ oz. 65 gr.
Sodium Metaborate	2 grams	29 grains	¼ oz. 8 gr.
Potassium Bromide	.5 gram	7½ grains	29 grains
Water to make	1 liter	32 ounces	1 gallon

Do not dilute for use.

Developing time at 68 F (20 C), 10 to 15 minutes for fine-grain films.

Larger amounts of metaborate may be used with corresponding reduction of developing time (up to 10 grams of metaborate per liter with a developing time of 5 minutes at 68 F) although slightly coarser grain size will then be obtained.

ANSCO 17M REPLENISHER

Add ¾ ounce of replenisher to Ansco 17M for each roll of 120 film or 36-exposure 35 mm film (or equivalent) developed. Maintain original volume of developer, discarding if necessary some used developer. No increase in original developing time necessary when replenisher is used in this manner.

	Metric	*Avoirdupois*	
Hot Water (125 F or 52 C)	750 cc.	24 ounces	3 quarts
Metol	2.2 grams	32 grains	¼ oz. 20 gr.
Sodium Sulfite, anhydrous	80 grams	2½ oz. 80 gr.	10¾ ounces
Hydroquinone	4.5 grams	66 grains	½ oz. 45 gr.
Sodium Metaborate	8 grams	¼ oz. 8 gr.	1 oz. 30 gr.
Water to make	1 liter	32 ounces	1 gallon

ANSCO 20 • M-H POSITIVE DEVELOPER

This clean-working developer is recommended for normal contrast with tray or tank development of positive film.

	Metric	*Avoirdupois*	
Hot Water (125 F or 52 C)	750 cc.	24 ounces	3 quarts
Metol	2 grams	29 grains	¼ oz. 8 gr.
Sodium Sulfite, anhydrous	25 grams	¾ oz. 40 gr.	3¼ oz. 50 gr.
Hydroquinone	4 grams	59 grains	½ oz. 15 gr.
Sodium Carbonate, monohydrated	18.5 grams	½ oz. 50 gr.	2½ ounces
Potassium Bromide	2 grams	29 grains	¼ oz. 8 gr.
Water to make	1 liter	32 ounces	1 gallon

Do not dilute for use. Normal developing time 3 to 5 minutes at 68 F (20 C).

ANSCO 22 • M-H TITLE DEVELOPER

This formula is recommended for tray or tank development of cine title film and positive film to obtain results of high contrast.

	Metric	*Avoirdupois*	
Hot Water (125 F or 52 C)	750 cc.	24 ounces	3 quarts
Metol	.8 gram	12 grains	47 grains
Sodium Sulfite, anhydrous	40 grams	1¼ oz. 40 gr.	5¼ oz. 50 gr.
Hydroquinone	8 grams	¼ oz. 8 gr.	1 oz. 30 gr.
Sodium Carbonate, monohydrated	50 grams	1½ oz. 75 gr.	6¾ ounces
Potassium Bromide	5 grams	72 grains	½ oz. 70 gr.
Water to make	1 liter	32 ounces	1 gallon

Do not dilute for use. Normal developing time 5 to 8 minutes at 68 F (20 C).

ANSCO 30 • X-RAY DEVELOPER

This developer is recommended for use with Ansco X-Ray Film. Ansco 30 is also suitable for Ansco aerial films as it is clean-working, has long life and gives high contrast.

	Metric	*Avoirdupois*	
Hot Water (125 F or 52 C)	750 cc.	24 ounces	3 quarts
Metol	3.5 grams	51 grains	¼ oz. 95 gr.
Sodium Sulfite, anhydrous	60 grams	2 ounces	8 ounces
Hydroquinone	9 grams	¼ oz. 20 gr.	1 oz. 90 gr.
Sodium Carbonate, monohydrated	40 grams	1¼ oz. 40 gr.	5¼ oz. 50 gr.
Potassium Bromide	2 grams	29 grains	¼ oz. 8 gr.
Water to make	1 liter	32 ounces	1 gallon

Do not dilute for use.

Normal developing time at 68 F (20 C), 6 minutes for X-Ray Film, 8 minutes for Non-Screen X-Ray Film.

ANSCO 40 • M-H TRAY DEVELOPER

This is a brilliant metol-hydroquinone tray developer for roll, pack and sheet film.

Stock Solution	*Metric*	*Avoirdupois*	
Hot Water (125 F or 52 C)	900 cc.	29 ounces	3½ quarts
Metol	4.5 grams	66 grains	½ oz. 45 gr.
Sodium Sulfite, anhydrous	54 grams	1¾ oz. 25 gr.	7¼ ounces
Hydroquinone	7.5 grams	¼ ounce	1 ounce
Sodium Carbonate, monohydrated	54 grams	1¾ oz. 25 gr.	7¼ ounces
Potassium Bromide	3 grams	44 grains	¼ oz. 65 gr.
Water to make	1 liter	32 ounces	1 gallon

For use dilute 1 part stock solution with 2 parts water.

Developing time 4 to 5 minutes at 68 F (20 C).

ANSCO 42 • M-H TANK DEVELOPER

This is a soft-working tank formula recommended for pack, roll and portrait films.

	Metric	*Avoirdupois*	
Hot Water (125 F or 52 C)	750 cc.	24 ounces	3 quarts
Metol	.8 gram	12 grains	47 grains
Sodium Sulfite, anhydrous	45 grams	1½ ounces	6 ounces
Hydroquinone	1.2 grams	18 grains	70 grains
Sodium Carbonate, monohydrated	8 grams	¼ oz. 8 gr.	1 oz. 30 gr.
Potassium Metabisulfite	4 grams	59 grains	½ oz. 15 gr.
Potassium Bromide	1.5 grams	22 grains	88 grains
Water to make	1 liter	32 ounces	1 gallon

Do not dilute for use.

Develop 15 to 20 minutes at 68 F (20 C).

ANSCO 45 • PYRO DEVELOPER

This formula is recommended for those users of Ansco film who prefer pyro development. Stock solutions should be kept in stoppered bottles.

Solution 1	*Metric*	*Avoirdupois*	
Sodium Bisulfite	9.8 grams	¼ oz. 35 gr.	1¼ oz. 25 gr.
Pyro	60 grams	2 ounces	8 ounces
Potassium Bromide	1.1 grams	16 grains	64 grains
Water to make	1 liter	32 ounces	1 gallon
Solution 2			
Sodium Sulfite, anhydrous	105 grams	3½ ounces	14 ounces
Water to make	1 liter	32 ounces	1 gallon
Solution 3			
Sodium Carbonate, monohydrated	85 grams	2¾ oz. 40 gr.	11 ounces
Water to make	1 liter	32 ounces	1 gallon

TANK DEVELOPMENT: Take one part each Solutions 1, 2, 3 and add 11 parts water. Normal developing time, from 9 to 12 minutes at 68 F (20 C). TRAY DEVELOPMENT: Take 1 part each Solutions 1, 2, 3 and add 7 parts water. Normal developing time, from 6 to 8 minutes at 68 F (20 C). Solutions will keep well when stored separately but final developer should be used immediately after mixing.

ANSCO 47 • METOL-HYDROQUINONE DEVELOPER

This is a long-life, clean-working formula which will give excellent results as a standard film developer for either tray or tank development.

	Metric	*Avoirdupois*	
Hot Water (125 F or 52 C)	750 cc.	3 quarts	2½ gallons
Metol	1.5 grams	88 grains	½ oz. 90 gr.
Sodium Sulfite, anhydrous	45 grams	6 ounces	1 lb. 5 oz.
Sodium Bisulfite	1 gram	60 grains	½ ounce
Hydroquinone	3 grams	¼ oz. 65 gr.	1¼ oz. 65 gr.
Sodium Carbonate, monohydrated	6 grams	¾ oz. 25 gr.	2¾ ounces
Potassium Bromide	.8 gram	47 grains	¼ oz. 55 gr.
Water to make	1 liter	1 gallon	3½ gallons

Do not dilute for use.*

TANK DEVELOPMENT: Normal developing time, 6 to 8 minutes at 68 F (20 C) with occasional agitation. TRAY DEVELOPMENT: Normal developing time, 5 to 7 minutes at 68 F (20 C).

*For longer developing times with tank development, dilute one part developing solution with one part water and develop 12 to 16 minutes at 68 F (20 C).

ANSCO 47A REPLENISHER

Add ¾ ounce of replenisher to Ansco 47 for each roll of 120 film (or equivalent) developed. Maintain original volume of developer, discarding if necessary some used developer. No increase in original developing time is necessary when replenisher is used in this manner.

	Metric	*Avoirdupois*	
Hot Water (125 F or 52 C)	750 cc.	24 ounces	3 quarts
Metol	3 grams	44 grains	¼ oz. 65 gr.
Sodium Sulfite, anhydrous	45 grams	1½ ounces	6 ounces
Sodium Bisulfite	2 grams	29 grains	¼ oz. 8 gr.
Hydroquinone	6 grams	88 grains	¾ oz. 20 gr.
Sodium Carbonate, monohydrated	12 grams	¼ oz. 65 gr.	1½ oz. 45 gr.
Water to make	1 liter	32 ounces	1 gallon

ANSCO 48M • METABORATE DEVELOPER

This formula is recommended for photofinishing, professional, and amateur film development and is suitable for deep tank use over a long period of time.

	Metric	*Avoirdupois*	
Hot Water (125 F or 52 C)	750 cc.	3 quarts	2½ gallons
Metol	2 grams	¼ oz. 8 gr.	¾ oz. 80 gr.
Sodium Sulfite, anhydrous	40 grams	5¼ oz. 50 gr.	1 lb. 2¾ oz.
Hydroquinone	1.5 grams	88 grains	½ oz. 90 gr.
Sodium Metaborate	10 grams	1¼ oz. 40 gr.	4¾ ounces
Potassium Bromide	.5 gram	30 grains	¼ ounce
Water to make	1 liter	1 gallon	3½ gallons

Do not dilute for use.

TANK DEVELOPMENT: Normal developing time 5 to 7 minutes at 68 F (20 C).

TRAY DEVELOPMENT: Normal developing time 4 to 6 minutes at 68 F (20 C).

These developing times apply to Ansco portrait, press and commercial films and to all Ansco roll and pack films.

ANSCO 48M REPLENISHER

Add ¾ ounce of replenisher to Ansco 48M for each roll of 120 film (or equivalent) developed. Maintain original volume of developer, discarding if necessary some used developer. No increase in original developing time is necessary when replenisher is used in this manner.

	Metric	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Metol	6.3 grams	92 grains — ¾ oz. 40 gr.
Sodium Sulfite, anhydrous	30 grams	1 ounce — 4 ounces
Hydroquinone	10 grams	¼ oz. 35 gr. — 1¼ oz. 40 gr.
Sodium Metaborate	40 grams	1¼ oz. 40 gr. — 5¼ oz. 50 gr.
Water to make	1 liter	32 ounces — 1 gallon

ANSCO 61 • M-H TRAY DEVELOPER

This developer is recommended for use with commercial film to produce negatives of normal contrast. It may also be used satisfactorily for roll, pack and sheet film for negatives of average brilliance.

	Metric	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Metol	1 gram	15 grains — 60 grains
Sodium Sulfite, anhydrous	15 grams	½ ounce — 2 ounces
Hydroquinone	2 grams	29 grains — ¼ oz. 8 gr.
Sodium Carbonate, monohydrated	15 grams	½ ounce — 2 ounces
Potassium Bromide	1 gram	15 grains — 60 grains
Water to make	1 liter	32 ounces — 1 gallon

Do not dilute for use. Normal developing time, 4 to 6 minutes at 68 F (20 C).

ANSCO 64 • RAPID M-H (TROPICAL) DEVELOPER

This is a clean-working developer of particular value for rapid development or development at high temperatures.

	Metric	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Metol	2.5 grams	36 grains — ¼ oz. 35 gr.
Sodium Sulfite, anhydrous	25 grams	¾ oz. 40 gr. — 3¼ oz. 50 gr.
Hydroquinone	6.5 grams	95 grains — ¾ oz. 50 gr.
Sodium Carbonate, monohydrated	16 grams	½ oz. 15 gr. — 2 oz. 60 gr.
Potassium Bromide	1 gram	15 grains — 60 grains
Water to make	1 liter	32 ounces — 1 gallon

Do not dilute for use.

Normal developing time—3 to 4 minutes at 68 F (20 C).

For development at temperatures higher than 68 F, see paragraph on time-temperature coefficients on page 21.

ANSCO 70 • HYDROQUINONE CAUSTIC DEVELOPER

This developer is recommended for Process film used in reproduction work.

Solution 1	*Metric*	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Hydroquinone	25 grams	¾ oz. 40 gr. — 3¼ oz. 50 gr.
Potassium Metabisulfite	25 grams	¾ oz. 40 gr. — 3¼ oz. 50 gr.
Potassium Bromide	25 grams	¾ oz. 40 gr. — 3¼ oz. 50 gr.
Water to make	1 liter	32 ounces — 1 gallon
Solution 2		
Cold Water	1 liter	32 ounces — 1 gallon
*Sodium Hydroxide (Caustic Soda Flakes)	36 grams	1 oz. 90 gr. — 4¾ oz. 30 gr.

Mix equal parts of Solutions 1 and 2 immediately before use.

Develop films not longer than 3 minutes at 68 F (20 C).

*May be substituted by:

Potassium Hydroxide	50 grams	1½ oz. 75 gr. — 6¾ ounces

ANSCO 72 • GLYCIN DEVELOPER

This clean-working formula is recommended for use with commercial films in reproduction work when a comparatively low maximum density is desired. It is also suitable for development of roll, pack and sheet film providing a long scale of tonal gradation.

Stock Solution	*Metric*	*Avoirdupois*
Hot Water (125 F or 52 C)	800 cc.	25 ounces — 3 quarts
Sodium Sulfite, anhydrous	125 grams	4¼ ounces — 1 lb. 1 oz.
Potassium Carbonate	250 grams	8½ ounces — 2 lb. 2 oz.
Glycin	50 grams	1½ oz. 75 gr. — 6¾ ounces
Water to make	1 liter	32 ounces — 1 gallon

TANK DEVELOPMENT: Take one part stock solution, fifteen parts water and develop 20 to 25 minutes at 68 F (20 C). TRAY DEVELOPMENT: Take one part stock solution, four parts water and develop 5 to 10 minutes at 68 F (20 C).

ANSCO 79 • PARAFORMALDEHYDE DEVELOPER

This is a standard formula recommended for development of Reprolith and Reprolith Ortho Films.

	Metric	*Avoirdupois*
Water (Not over 90 F or 32 C)	2000 cc.	64 ounces
Sodium Sulfite, anhydrous	120 grams	4 ounces
Paraformaldehyde	30 grams	1 ounce
Potassium Metabisulfite	10.5 grams	¼ oz. 45 gr.
Boric Acid Crystals	30 grams	1 ounce
Hydroquinone	90 grams	3 ounces
Potassium Bromide	6 grams	88 grains
Water to make	4 liters	1 gallon

Dissolve chemicals in the order given and use solution full strength. Normal developing time 2 to 3 minutes at 68 to 70 F (20 to 21 C). For Reprolith Orthochromatic, develop 1½ to 3 minutes at same temperature.

ANSCO 81 • REPROLITH DEVELOPER

Formula 81 provides a single-solution developer of excellent keeping quality for the development of Reprolith Film.

	Metric	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Hydroquinone	35 grams	1 oz. 75 gr. — 4¾ ounces
Sodium Sulfite, anhydrous	55 grams	1¾ oz. 40 gr. — 7¼ oz. 50 gr.
Sodium Carbonate, monohydrated	80 grams	2½ oz. 80 gr. — 10¾ ounces
Citric Acid	5.5 grams	80 grains — ½ oz. 100 gr.
Potassium Bromide	10 grams	¼ oz. 35 gr. — 1¼ oz. 40 gr.
Water to make	1 liter	32 ounces — 1 gallon

Do not dilute for use. Normal developing time not longer than 3 minutes at 68 F (20 C).

ANSCO 90 • HIGH CONTRAST M-H TRAY DEVELOPER

This developer has been particularly designed for use with Commercial and Process films to produce negatives of brilliant contrast.

	Metric	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Metol	5 grams	72 grains — ½ oz. 70 gr.
Sodium Sulfite, anhydrous	40 grams	1¼ oz. 40 gr. — 5¼ oz. 50 gr.
Hydroquinone	6 grams	88 grains — ¾ oz. 20 gr.
Sodium Carbonate, monohydrated	40 grams	1¼ oz. 40 gr. — 5¼ oz. 50 gr.
Potassium Bromide	3 grams	44 grains — ¼ oz. 65 gr.
Water to make	1 liter	32 ounces — 1 gallon

Do not dilute for use.

Normal developing time, 4 to 6 minutes at 68 F (20 C).

ANSCO 103 • PAPER DEVELOPER

EK D72

This formula is recommended as a developer for Monodex, Convira and Speedex papers when cold, blue-black tones are desired.

Stock Solution	*Metric*	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Metol	3.5 grams	51 grains — ¼ oz. 95 gr.
Sodium Sulfite, anhydrous	45 grams	1½ ounces — 6 ounces
Hydroquinone	11.5 grams	¼ oz. 50 gr. — 1¼ oz. 90 gr.
Sodium Carbonate, monohydrated	78 grams	2½ oz. 45 gr. — 10½ ounces
Potassium Bromide	1.2 grams	18 grains — 70 grains
Water to make	1 liter	32 ounces — 1 gallon

Dilute 1 part stock solution with 2 parts water, and use at 68 F. For Monodex, Speedex and Convira normal developing time is 45 seconds. Other contact papers may require 1 to 1½ minutes.

ANSCO 110 • DIRECT BROWN-BLACK PAPER DEVELOPER

Beautiful warm tones may be obtained with this developer on both contact and projection papers.

Stock Solution	*Metric*	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Hydroquinone	22.5 grams	¾ ounce — 3 ounces
Sodium Sulfite, anhydrous	57 grams	1¾ oz. 65 gr. — 7½ ounces
Sodium Carbonate, monohydrated	75 grams	2½ ounces — 10 ounces
Potassium Bromide	2.75 grams	40 grains — ¼ oz. 50 gr.
Water to make	1 liter	32 ounces — 1 gallon

For use dilute 1 part stock solution with 5 parts water.

Give prints 3 to 4 times normal exposure and develop 5 to 7 minutes at 68 F (20 C).

ANSCO 113 • AMIDOL PAPER DEVELOPER

This formula must be mixed fresh each time, and it is recommended only for small lots of prints.

	Metric	*Avoirdupois*
Amidol	6.6 grams	96 grains
Sodium Sulfite, anhydrous	44 grams	1½ ounces
Potassium Bromide	.55 gram	8 grains
Water to make	1 liter	32 ounces

Do not dilute for use. If hot water is used for dissolving chemicals, the sodium sulfite and potassium bromide should be dissolved first and the amidol added only after the solution has cooled.

For development of Cykora and similar papers use twice the amount of potassium bromide specified above.

Develop 1 to 2 minutes at 68 F (20 C).

ANSCO 115 • GLYCIN-HYDROQUINONE DEVELOPER

This is a warm-tone developer suitable for Cykon, Cykora, Indiatone, Brovira, and similar papers.

Stock Solution	*Metric*	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Sodium Sulfite, anhydrous	90 grams	3 ounces — 12 ounces
Sodium Carbonate, monohydrated	150 grams	5 ounces — 1 lb. 4 oz.
Glycin	30 grams	1 ounce — 4 ounces
Hydroquinone	9.5 grams	¼ oz. 30 gr. — 1¼ oz. 5 gr.
Potassium Bromide	4 grams	59 grains — ½ oz. 15 gr.
Water to make	1 liter	32 ounces — 1 gallon

For warm tones, dilute 1 part stock solution with 3 parts water and develop prints 2½ to 3 minutes at 68 F (20 C).

Continued on next page . . .

ANSCO 115 CONTINUED

For very warm tones and more open shadows, especially with Cykora, dilute 1 part stock solution with 6 parts water, giving prints 3 to 4 times normal exposure and 2½ to 5 minutes development. Because of dilution of the developer, solution will exhaust more rapidly and will require more frequent replacement.

ANSCO 120 • SOFT-WORKING PAPER DEVELOPER

This is a soft-working developer, primarily intended for portrait work where soft gradation is required.

Stock Solution	*Metric*	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Metol	12.3 grams	¼ oz. 70 gr. — 1½ oz. 60 gr.
Sodium Sulfite, anhydrous	36 grams	1 oz. 88 gr. — 4¾ ounces
Sodium Carbonate, monohydrated	36 grams	1 oz. 88 gr. — 4¾ ounces
Potassium Bromide	1.8 grams	26 grains — ¼ ounce
Water to make	1 liter	32 ounces — 1 gallon

For use, dilute 1 part stock solution with 2 parts water.

Normal developing time, 1½ to 3 minutes at 68 F (20 C).

ANSCO 125 • PAPER AND FILM DEVELOPER

This formula is recommended for development of Cykon, Cykora, Brovira, Convira and similar papers. It can also be used for development of roll, pack and sheet film when brilliant negatives are desired.

Stock Solution	*Metric*	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Metol	3 grams	44 grains — ¼ oz. 65 gr.
Sodium Sulfite, anhydrous	44 grams	1½ ounces — 6 ounces
Hydroquinone	12 grams	¼ oz. 65 gr. — 1½ oz. 45 gr.
Sodium Carbonate, monohydrated	65 grams	2 oz. 75 gr. — 8¾ ounces
Potassium Bromide	2 grams	29 grains — ¼ oz. 8 gr.
Water to make	1 liter	32 ounces — 1 gallon

PAPER DEVELOPMENT: Dilute 1 part stock solution with 2 parts water. Develop 1 to 2 minutes at 68 F (20 C). For softer and slower development dilute 1 to 4, and develop 1½ to 3 minutes at 68 F (20 C). For greater brilliance, shorten the exposure slightly and lengthen the developing time. For greater softness, lengthen the exposure slightly and shorten the developing time.

FILM DEVELOPMENT: Dilute 1 part stock solution with 1 part water and develop 3 to 5 minutes at 68 F (20 C). For softer results, dilute 1 to 3 and develop 3 to 5 minutes at 68 F (20 C).

ANSCO 130 • UNIVERSAL PAPER DEVELOPER

This formula is a universal developer for all projection and contact papers. It gives rich black tones with excellent brilliance and detail. Ansco 130 provides unusual latitude in development and is clean-working even with long developing times.

Stock Solution	*Metric*	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Metol	2.2 grams	32 grains — ¼ oz. 20 gr.
Sodium Sulfite, anhydrous	50 grams	1½ oz. 75 gr. — 6¾ ounces
Hydroquinone	11 grams	¼ oz. 50 gr. — 1¼ oz. 90 gr.
Sodium Carbonate, monohydrated	78 grams	2½ oz. 50 gr. — 10½ ounces
Potassium Bromide	5.5 grams	80 grains — ¾ ounce
Glycin	11 grams	¼ oz. 50 gr. — 1¼ oz. 90 gr.
Water to make	1 liter	32 ounces — 1 gallon

The prepared stock solution is clear but slightly colored. The coloration in this case does not indicate the developer has deteriorated or is unfit for use.

For use, dilute 1 part stock solution with 1 part water.

Normal developing time at 68 F (20 C) for Brovira, 2 to 6 minutes, for Convira, Cykon, Cykora and Indiatone, 1½ to 3 minutes.

Greater contrast can be obtained by using the developer stock solution full strength. Softer results can be obtained by diluting 1 part stock solution with 2 parts water.

ANSCO 135 • WARM-TONE PAPER DEVELOPER

This developer is recommended for rich, warm-black tones with Cykon, Convira, Cykora, Indiatone and similar papers.

Stock Solution	*Metric*	*Avoirdupois*
Hot Water (125 F or 52 C)	750 cc.	24 ounces — 3 quarts
Metol	1.6 grams	24 grains — 94 grains
Sodium Sulfite, anhydrous	24 grams	¾ oz. 20 gr. — 3¼ ounces
Hydroquinone	6.6 grams	96 grains — ¾ oz. 60 gr.
Sodium Carbonate, monohydrated	24 grams	¾ oz. 20 gr. — 3¼ ounces
Potassium Bromide	2.8 grams	40 grains — ¼ oz. 50 gr.
Water to make	1 liter	32 ounces — 1 gallon

For use, dilute 1 part stock solution with 1 part water. A properly exposed print will be fully developed at 68 F (20 C) in about 1½ to 2 minutes. Complete development may be expected to take slightly longer with rough-surfaced papers than with semi-glossy or luster-surfaced papers.

For greater softness, dilute the bath with water up to equal quantities of developer and water. To increase the warmth, add bromide up to double the amount in the formula. The quantity of bromide specified in the formula, however, assures rich, warm, well-balanced tones.

ANSCO FILM NOTCHING IDENTIFICATION CODE

Ansco professional sheet films have the following notches to permit easy identification in the darkroom. The emulsion side of the film is toward you when the notches are in top edge of the upper right-hand corner (or in the bottom edge of the lower left-hand corner).

The complete notching system illustrated below applies only to the 3¼ x 4¼ and larger sizes of Ansco films. All sizes of Ansco sheet films smaller than 3¼ x 4¼ are marked with a single, shallow notch in the usual position (outlined in the paragraph above.) This small notch is used only for identification of the emulsion side and obviously cannot be used for indication of the emulsion type.

ANSCO FILM NOTCHING CODE